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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 2, 1993

TO: Minerals File

FROM: Holland Shepherd, Senior Reclamation Specialist HLWS

RE: Site Inspection, H. E. Davis & Sons, Inc., Henry 1 & 2 Mine, Mine, M/023/023, Juab County, Utah

Date of Inspection:	January 26, 1993
Time of Inspection:	2:00 p.m. - 4:30 p.m.
Conditions:	Sunny, cold, snow on ground, muddy
Participants:	Lee Davis, Harold Davis, H. E. Davis & Sons; Holland Shepherd, DOGM

The purpose of this field inspection was to evaluate the mine site relative to a large mine permit review that is currently underway. The Division is reviewing a mine plan submitted by the operator two years ago. The operator currently has an approved mining and reclamation plan from the U.S. Forest Service. Nearly all of the mine site is located on forest service land. The Division of Oil, Gas and Mining is permitting this plan to bring it up to speed with state requirements.

The mine operator has reclaimed a 1.4 acre section of the mine located at the top and southwest corner of the mine quarry. This area has been retopsoiled along with any benches which were accessible. Most benches, which are no more than 10 feet in width, have also been topsoiled. Seeds were applied in October, 1992. This is the only portion of the mine site that is under reclamation.

We discussed the final configuration of the quarry highwalls. They will have 10 foot benches, and there will be 30 foot cut walls in between the benches. The operator will be able to seed the benches, even though they are only 10 feet in width because topsoiling will take place before the wider work area is cut down along the hillside. The highwall, at the end of mining, will be approximately 250 feet in height and will be constructed all the way down to where the present stream channel and road bed are located.

The operator proposes to mine approximately 22,000 - 25,000 tons of gypsum ore a year. The proposal will maintain the mine in operation for 15 - 20 years. The operator typically mines during December, January and February only, because of the reduction in dust problems. Also, this provides work for employees of the company who might otherwise be out of work during the winter months. The company also maintains several sand and gravel operations across the state.

The height of the highwall will be approximately 250 feet, and the length of the highwall will be approximately 800 feet. Once the operator has mined this ore body out, the mine will probably close because no more ore of a sizeable amount can be found within the area of the present mine.

The mine operator will not mine below the elevation of the present stream channel so that the stream channel will be essentially intact. It lies on top of an anhydrite rockbed which is fairly dense. The stream channel will be designed to follow the northern edge of the present quarry. Once it breaks out of the quarry it will follow the original stream channel down to a sediment pond. The sediment pond will be left intact at the end of mining. The operator may riprap the upper reaches of the stream channel where it will feed into the mine quarry, if it is found that the material there will be loose or fine enough to create a silt problem.

The mine operator will salvage no more topsoil at the site, since none will be available to salvage. The mine operator will use material fines from the waste dump. This material will consist largely of gypsum and arripean shales, which when fertilized and mulched should provide a good soil medium. This material will be used to reclaim the roads and the pads. This material will also be used for the base of quarry reclamation and the final benches, or any benches from this point that haven't already been reclaimed.

Some very old highwalls were constructed on the site before H.E. Davis & Sons started mining there. They are about 30-40 years old. These particular highwalls are quite steep and even display a negative vertical angle. The forest service has asked that the operator bench these highwalls to reduce their slope and provide stability at final reclamation. The operator has committed to do this even though this portion of the mine will not provide marketable ore material. The highwall that will be benched and sloped back is located on the south side of the road. The highwall on the north side of the road will be left, as it blocks a view from the road of the mine quarry so that people driving along the highway can't see the mine quarry, thereby helping to maintain area aesthetics.

We discussed improving the reclamation application by including shrubs in the seed mix. Mr. Davis agreed to this. Also we discussed adding fertilizer mulch to the fine waste material to help develop a good soil planting medium with the fine waste material. Mr. Davis also agreed to doing this.

I showed Mr. Davis the reclamation estimate that the Division put together which is $22,100; about $11,000 less than what the forest service estimated. I explained to him we would send him a copy of this along with the upcoming review letter and that he could take that letter and use as a means of negotiating with the forest service.

We looked at the sediment pond which is located on the northwest portion of the mine site. The sediment pond was just constructed and Mr. Davis indicated it would probably have to be beefed up a little bit to prevent flood damage. I suggested that the operator build a spillway into the dike face so that if the sediment pond ever overflowed there wouldn't be a problem with damage to the dike itself.

I indicated to the Davis' that we would be wrapping up the review letter and sending that to them along with a copy of the reclamation surety.

jb
cc: Harold Davis, Operator
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